

Board of Regents Support Fund, FY 2013-14

Review of Proposals Submitted to the Traditional Enhancement Program in Chemistry

Final Report of Consultants

February 21-22, 2014

Submitted by:

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and

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BOARD OF REGENTS SUPPORT FUND
TRADITIONAL ENHANCEMENT COMPONENT, FY 2013-14
CHEMISTRY PROPOSALS

Introduction

A review panel consisting of Dr. Isai Urasa (chair), Hampton University, and Dr. Richard D. Foust, James Madison University, met February 21-22, 2014, in Hampton, Virginia and via telephone and electronic communications to evaluate twenty-three (23) proposals submitted through the Traditional Enhancement Program component of the Board of Regents Support Fund in chemistry. Two proposals (010CHE-14 and 015CHE-14) submitted in this program component could not be evaluated since they were incomplete upon submission. No scoring sheets or narrative reviews for these proposals are included in this report.

The panel received the following materials prior to the review: (1) the twenty-one (21) complete proposals and the appropriate rating forms; (2) a summary of the proposals listing titles, PIs, submitting institutions, and funds requested; (3) the appropriate RFP containing criteria for evaluation; and (4) a copy of the most recent chemistry (2010-11) review report. After studying all proposals individually, the panel reviewed and evaluated them collectively. Each proposal was discussed individually and its merits were evaluated with respect to criteria enumerated in the RFP. Each proposal received a thorough and impartial review. Subsequent to the individual evaluations, the panel ranked all proposals and recommended funding levels for seven (7) proposals deemed worthy of funding. Total first-year funds of \$2,937,099 were requested by all proposals in this competition. The reviewers recommended first-year awards totaling \$788,107.

This report contains two tables that rank all proposals. Table I contains a rank-order list of the proposals deemed highly recommended for funding with the recommended funding levels. All proposals in that table but one are recommended for full funding. Table II lists proposals that are not recommended for funding.

A detailed review of each proposal follows immediately after the tables. A summary of all proposals submitted (Appendix A) and a copy of the rating forms used in the evaluations (Appendix B) are attached at the end of the report.

TABLE I
Chemistry Proposals Highly Recommended for Funding

RANK	RATING	PROPOSAL NO.	INSTITUTION	1st YR. FUNDS REQUESTED	1st YR. FUNDS RECOMMENDED	2nd YR. FUNDS REQUESTED	2nd YR. FUNDS RECOMMENDED
1	98	017CHE-14	Tulane	\$124,872	\$124,872		
2	95	020CHE-14	ULL	\$33,222	\$33,222		
3	93	013CHE-14	Nicholls	\$8,995	\$8,995		
4	92	023CHE-14	Xavier	\$143,430	\$136,030		
5	91	014CHE-14	Nicholls	\$206,700	\$206,700		
6	86	012CHE-14	La Tech	\$70,988	\$70,988		
7	84	006CHE-14	LSU and A&M	\$207,300	\$207,300	\$0	\$0
				\$795,507	\$788,107	\$0	\$0

TABLE II
Chemistry Proposals Not Recommended for Funding

RANK	RATING	PROPOSAL NO.	INSTITUTION	1st YR. FUNDS REQUESTED	1st YR. FUNDS RECOMMENDED	2nd YR. FUNDS REQUESTED	2nd YR. FUNDS RECOMMENDED
8	82	003CHE-14	LSU AG	\$117,746	\$0		
9	78	009CHE-14	LSU and A&M	\$131,149	\$0	\$0	\$0
10	75	019CHE-14	ULL	\$98,472	\$0		
11	74	002CHE-14	LSU AG	\$134,650	\$0		
11	74	016CHE-14	SUBR	\$122,649	\$0	\$0	\$0
11	74	022CHE-14	UNO	\$239,475	\$0		
14	73	007CHE-14	LSU and A&M	\$71,868	\$0		
15	72	001CHE-14	Centenary	\$235,937	\$0		
15	72	008CHE-14	LSU and A&M	\$189,173	\$0		
17	71	004CHE-14	LSU AG	\$269,894	\$0	\$0	\$0
17	71	018CHE-14	ULL	\$31,940	\$0		
19	69	011CHE-14	LSU Shreveport	\$79,000	\$0		
20	66	021CHE-14	UNO	\$226,737	\$0		
21	58	005CHE-14	LSU and A&M	\$171,332	\$0	\$0	\$0
				\$2,120,022	\$0	\$0	\$0

Note: Proposals 010CHE-14 and 015CHE-14 were incomplete upon submission and could not be reviewed.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 001CHE-14

INSTITUTION: Centenary College

TITLE OF PROPOSAL: Enhanced Chemical Education at Centenary College Facilitated by
NMR Spectroscopy

PRINCIPAL INVESTIGATOR: Ernest Blakeney

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 1 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 5 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 18 (of 21 points)
B.3 2 (of 5 points)
B.4 2 (of 5 points)
B.5 0 (of 5 points)
B.6 2 (of 5 points)
B.7 4 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

72

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY Requested Amount: \$235,937
RECOMMENDATIONS: Recommended Amount: \$0

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The applicant requests funds to purchase a Bruker AVANCE III 400 MHz high-performance digital NMR spectrometer for use in the organic, analytical, and advanced inorganic and biochemistry laboratories and for independent research projects. The instrument requested will have the capability of recording NMR spectra for ^1H , ^{13}C , ^{19}F and ^{31}P . The department has done a commendable job of developing an instrument-intensive laboratory curriculum at the freshman and sophomore levels. The goal of this proposal is to acquire a more versatile, high sample-throughput NMR spectrometer to extend the intensive instrumentation program to the junior and senior years. Although this is a commendable goal, the instrument requested is not adequately justified. No funding is recommended.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 002CHE-14

INSTITUTION: LSU Agricultural Center

TITLE OF PROPOSAL: Equipment for the Enhancement of Filtration of Chemical
Components Research and Teaching at Louisiana State University
Agricultural Center

PRINCIPAL INVESTIGATOR: Kayanush Aryana

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a _____ (For S/E)
or _____ (of 10 points)
E.2b 4 (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 9 (of 10 points)
B.2 16 (of 21 points)
B.3 3 (of 5 points)
B.4 3 (of 5 points)
B.5 3 (of 5 points)
B.6 2 (of 5 points)
B.7 0 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

74

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$134,650</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This is a proposal for funding filtration equipment that will enhance teaching and research related to separating sugars, fats, and specific bioactive peptides, lactoferrin, immunoglobulins and other compounds from fluid products such as milk, drinkable yogurts, rice milk, and vegetable and fruit juices. The objective of this project is to provide training for graduate and undergraduate students in microfiltration and ultrafiltration techniques of fluid dairy products. The applicant adequately described how microfiltration and ultrafiltration equipment is used in the food industry, but the proposal lacked details about how the instrumentation would be implemented in the curricula. No funding is recommended.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 003CHE-14

INSTITUTION: LSU Agricultural Center

TITLE OF PROPOSAL: Enhancing the Food Science Carbohydrate Laboratory

PRINCIPAL INVESTIGATOR: Joan King

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 18 (of 21 points)
B.3 4 (of 5 points)
B.4 5 (of 5 points)
B.5 1 (of 5 points)
B.6 4 (of 5 points)
B.7 0 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

82

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$117,746</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal from the LSU Ag Center requests funds to purchase a high-performance liquid chromatograph with a refractive index detection system to be used in the School of Nutrition and Food Sciences food laboratory to analyze food samples for carbohydrates. The instrumentation would be used in four undergraduate food science courses (Food Engineering Systems, Food Composition Analysis, Food Chemistry, and New Food Product Development). This proposal did a good job of providing background information and explaining the need for the instrumentation, but it lacks specifics about how the instrumentation would be used in the four courses mentioned. A more detailed experimental protocol is necessary to justify purchase of the instrumentation requested. The panel does not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 004CHE-14

INSTITUTION: LSU Agricultural Center

TITLE OF PROPOSAL: Enhancement of Preservative-Treated Wood Recycling Research
at the Louisiana Forest Products Development Center

PRINCIPAL INVESTIGATOR: Todd Shupe

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 6 (For S/E)
or (of 10 points)
E.2b (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 12 (of 21 points)
B.3 2 (of 5 points)
B.4 2 (of 5 points)
B.5 1 (of 5 points)
B.6 2 (of 5 points)
B.7 2 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score: 71 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY RECOMMENDATIONS:	Requested Amount:	YEAR 1	YEAR 2
		<u>\$269,894</u>	<u>\$0</u>
	Recommended Amount:	<u>\$0</u>	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal requests funds to purchase a liquid chromatography and inductively coupled plasma mass spectrometer to enhance programs in the areas of preservative-treated wood recycling and bio-based processing. The costly instrumentation would be used in four courses taught in the School of Renewable Natural Resources. There are plans to make the instrumentation available to other departments on campus. The description of how the equipment would be used in teaching is vague and lacks sufficient detail to evaluate the proposal effectively. Objective 3, outreach and extension, identifies ongoing outreach activities, but does not provide information about how the requested instrumentation would change or improve these activities. The panel does not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 005CHE-14

INSTITUTION: Louisiana State University and A&M College

TITLE OF PROPOSAL: Development of a Grating-Based X-ray Interferometer at the LSU
CAMD Synchrotron Tomography Beamline

PRINCIPAL INVESTIGATOR: Leslie Butler

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 3 (of 5 points)
A.3 3 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)
C.2 1 (of 1 point)
C.3 2 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 5 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 5 (of 10 points)
B.2 10 (of 21 points)
B.3 3 (of 5 points)
B.4 2 (of 5 points)
B.5 3 (of 5 points)
B.6 2 (of 5 points)
B.7 2 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

58

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY RECOMMENDATIONS:	Requested Amount:	YEAR 1	YEAR 2
		<u>\$171,332</u>	<u>\$0</u>
	Recommended Amount:	<u>\$0</u>	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This LSU CAMD request would permit a research group to extend current synchrotron-based research interests and activities to the study of batteries, testing for battery wear and battery failure analysis. This project appears to be incidental to an already sophisticated research infrastructure with poor justification for the requested equipment. The proposal's description and plan consist of a number of pages of highly technical background information that is not presented in a manner that helps the panel to evaluate/determine its relevance and appropriateness. It is unclear what will be done and the impact the work will have on students, the curriculum, or even the existing research program. Also unclear is what is to be evaluated. There is nothing extraordinary in this proposal and it is uncertain that the work would add any significant eminence to CAMD. The panel does not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 006CHE-14

INSTITUTION: Louisiana State University and A&M College

TITLE OF PROPOSAL: Acquisition of a High-Resolution Scanning Probe Microscope for
Chemistry, Materials and Nanoscience Research

PRINCIPAL INVESTIGATOR: Jayne Garno

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 0 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)
B.2 14 (of 21 points)
B.3 5 (of 5 points)
B.4 4 (of 5 points)
B.5 4 (of 5 points)
B.6 5 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

84

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY RECOMMENDATIONS:	Requested Amount:	YEAR 1	YEAR 2
		<u>\$207,300</u>	<u>\$0</u>
	Recommended Amount:	<u>\$207,300</u>	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal is a request for funding for a scanning probe microscope (SPM) to support research in surface characterization. Three research areas will be supported by this equipment: chemistry, materials science, and nanoscience. The applicant indicates that there is an operational SPM system at LSU, which is oversubscribed. There is some mention of new measurement protocols to be developed with the new system, but the applicant failed to provide information about specific research and instructional activities that would be compromised by the lack of an additional SPM. Otherwise, the overall plan and the plan for equipment maintenance are good. The evaluation plan is somewhat vague. In spite of these weaknesses, the project has considerable merit and is recommended for full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 007CHE-14

INSTITUTION: Louisiana State University and A&M College

TITLE OF PROPOSAL: Facilities for Materials and Devices Characterization: Near-Infrared Enhanced Phosphorimeter

PRINCIPAL INVESTIGATOR: Evgueni Nesterov

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 3 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 1 (of 2 points)
E.2a 7 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 6 (of 10 points)
B.2 11 (of 21 points)
B.3 3 (of 5 points)
B.4 3 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 2 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

73

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$71,868</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal seeks funding for a phosphorimeter to complement an existing fluorimeter. The PI mentions research groups that might use the instrument occasionally, but there are few facts about direct links with research projects/programs for which the availability of a phosphorimeter is critical. The goal is unidentifiable and the objectives are not measurable. The overall project plan is also very vague. The PI should have presented examples of compounds that are better carried out with a phosphorimeter than a fluorimeter. Examples would also have highlighted the fundamental differences between phosphorescence and fluorescence as molecular emission techniques and how they complement each other. Given the absence of this information, it was not obvious to the panel what the impact on the curriculum and students would be. Overall, based on the information provided, the reviewers find no compelling need for a phosphorimeter and do not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 008CHE-14

INSTITUTION: Louisiana State University and A&M College

TITLE OF PROPOSAL: Walk-Up Mass Spectrometer with Liquid Chromatography
for Chemical Synthesis

PRINCIPAL INVESTIGATOR: Justin Ragains

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 5 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)
B.2 18 (of 21 points)
B.3 3 (of 5 points)
B.4 2 (of 5 points)
B.5 1 (of 5 points)
B.6 2 (of 5 points)
B.7 0 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes _____ No X

G. Total Score:

72

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$189,173</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

An LSU faculty member requests funds to purchase an Agilent 6100 quadruple LC/MS system to use in analyzing reaction mixtures from several synthetic organic chemistry projects. The applicant will be the primary user of this instrumentation, although other faculty members have been identified as potential users. The equipment would be available for use in several undergraduate chemistry classes and for undergraduate research. This instrumentation would become part of the mass spectrometry facility at LSU that currently houses six mass spectrometer systems, providing capabilities for a vast array of mass spectrometric techniques. Since the proposal did not provide sufficient justification for the purchase of a seventh mass spectrometer, the panel does not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 009CHE-14

INSTITUTION: Louisiana State University and A&M College

TITLE OF PROPOSAL: Enhancement of the LSU NMR Facility

PRINCIPAL INVESTIGATOR: George Stanley

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 8 (For S/E)
or (of 10 points)
E.2b (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 10 (of 21 points)
B.3 5 (of 5 points)
B.4 3 (of 5 points)
B.5 3 (of 5 points)
B.6 4 (of 5 points)
B.7 1 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No

G. Total Score:

78

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY RECOMMENDATIONS:	Requested Amount:	YEAR 1	YEAR 2
		<u>\$131,149</u>	<u>\$0</u>
	Recommended Amount:	<u>\$0</u>	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

A researcher at Louisiana State University requests funds to refurbish an existing 700 MHz NMR spectrometer system and to purchase an uninterruptible power supply for a 400 MHz NMR. The upgrade will provide enhanced capabilities for the growing biological and natural product chemistry research efforts at LSU, supporting approximately 144 doctoral students in the areas of synthetic and bio-analytical chemistry. There is no discussion of how the instrumentation requested would actually enhance the NMR facilities at LSU. The unique role of the spectrometers, which are the focus of this proposal, is not elucidated in the proposal and it appears that the ongoing research would not be greatly enhanced if the proposal were funded. The panel does not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 011CHE-14

INSTITUTION: Louisiana State University in Shreveport

TITLE OF PROPOSAL: Enhancement of Spectroscopic Technology in Biochemistry
Laboratories

PRINCIPAL INVESTIGATOR: Elahe Mahdavian

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 2 (of 5 points)
A.3 2 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 2 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 5 (of 10 points)
B.2 11 (of 21 points)
B.3 2 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 4 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 10 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

69

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$79,000</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal is a request for funding a Circular Dichroism (CD) spectrometer for use in teaching and research, with an emphasis on elucidation of the structures of biomolecules. The panel had several questions due to a lack of details provided in the proposal. What technological and educational gaps will the CD instrument fill? How will the CD enhance inquiry-based science as the PI claims? How will the courses listed be enhanced? Some of the information in part B of the plan section belonged in section A. In light of the lack of clarity of the goals, objectives, and plan of the project, it is difficult to determine its potential economic and/or cultural impact. Little about faculty expertise in CD instrumentation is stated. Also, the desired model, a Jasco J-1100, is not well justified. Overall, the proposed project is poorly rationalized and described. The proposal is not recommended for funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 012CHE-14

INSTITUTION: Louisiana Tech University

TITLE OF PROPOSAL: Improvements to the Sophomore, Junior, and Senior Level Laboratory Experiences at Louisiana Tech University

PRINCIPAL INVESTIGATOR: Marilyn Cox

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 6 (of 10 points)
B.2 15 (of 21 points)
B.3 3 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

86

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$70,988</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$70,988</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

Louisiana Tech requests Enhancement funds to upgrade laboratory equipment by acquiring a scanning UV-Vis spectrophotometer to augment existing Spectronic-20 spectrophotometers. This upgrade will not only provide students with exposure to modern facilities but will also improve instrument accessibility, including remote data acquisition and processing. The project is well rationalized, but its goals and objectives are not measurable. Examples of new laboratory activities based on the new instrument should have been discussed. The project plan and evaluation are somewhat lacking in detail. In spite of these shortcomings, the proposed equipment upgrade is reasonable and essential. The project has potential for significantly enhancing the chemistry program at the institution. The proposal is recommended for full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 013CHE-14

INSTITUTION: Nicholls State University

TITLE OF PROPOSAL: Enhancing Computational Chemistry Instruction

PRINCIPAL INVESTIGATOR: Yusheng Dou

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 21 (of 21 points)
B.3 2 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes No X

G. Total Score:

93

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$8,995</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$8,995</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This application is a modest request for funding computer equipment and requisite software to support a new curricular emphasis in computational chemistry at Nicholls. The goals and objectives are clearly stated and the plan is well thought out, although the evaluation plan is somewhat lacking. Examples of new lab activities to be developed should have been provided. Otherwise, this is a worthy project that the panel recommends for full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 014CHE-14

INSTITUTION: Nicholls State University

TITLE OF PROPOSAL: Acquisition of a 300 MHz NMR Spectrometer to Enhance
Research and Instruction in Chemistry and Chemical Biology

PRINCIPAL INVESTIGATOR: Vincent Sichula

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 8 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 7 (of 10 points)
B.2 21 (of 21 points)
B.3 3 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes _____ No X

G. Total Score:

91

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$206,700</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$206,700</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal is a request for support of an NMR spectrometer for Nicholls's chemistry program. The instrument will replace an older model that is no longer operational. Several goals and objectives will be accomplished with the new acquisition. The plan is well thought out. However, more attention should have been given to the available NMR technology on the market to ensure that the requested model is appropriate for the intended purpose. The evaluation plan and the expected economic and cultural impact sections lack some detail. Aside from these shortcomings, the project is well rationalized and it appears to be essential for the chemistry program at Nicholls State University. The panel recommends full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 016CHE-14

INSTITUTION: Southern University Baton Rouge

TITLE OF PROPOSAL: Enhancement of FT-Raman Capability for Research and Teaching
in the Department of Chemistry at Southern University

PRINCIPAL INVESTIGATOR Weihua Wang

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No
A.2 3 (of 5 points)
A.3 3 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 4 (of 6 points)
C.2 1 (of 1 point)
C.3 2 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 5 (For S/E)
or (of 10 points)
E.2b (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 15 (of 21 points)
B.3 3 (of 5 points)
B.4 4 (of 5 points)
B.5 4 (of 5 points)
B.6 3 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes _____ No X

G. Total Score: 74 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

		YEAR 1	YEAR 2
SPECIFIC BUDGETARY RECOMMENDATIONS:	Requested Amount:	<u>\$122,649</u>	<u>\$0</u>
	Recommended Amount:	<u>\$0</u>	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

A Southern University faculty member requests funding to purchase an FT-Raman spectrometer to be used in teaching and research. The rationale for this request lacks essential information. What gap will the new instrument fill? Little information is provided about existing instrumentation. While the proposal's goals and objectives are measurable, the information provided in the plan, potential economic impact, and the evaluation sections is very vague. This proposal might be fundable in another cycle after major revisions that address panel concerns and provide missing information.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 017CHE-14

INSTITUTION: Tulane University

TITLE OF PROPOSAL: Enhancement of Facilities for Time Resolved Spectroscopy in the
Tulane Chemistry Department

PRINCIPAL INVESTIGATOR: Russell Schmehl

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 5 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 20 (of 21 points)
B.3 5 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

98

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$124,872</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$124,872</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This application's principal investigator and his colleagues at Tulane University have established an impressive research infrastructure based on laser-induced time-resolved spectroscopy. The group is highly recognized in this research area. The request will allow the researchers to add essential facilities to the existing infrastructure and enhance their research capabilities. The proposal is very well written and all key and relevant areas are adequately presented. The reviewers find no major weaknesses in this proposal and therefore recommend it highly for full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 018CHE-14

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Purchase of a FT-IR Spectrophotometer for Teaching and
Research in the Chemistry Curriculum

PRINCIPAL INVESTIGATOR: August Gallo

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 3 (of 5 points)
A.3 4 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 3 (of 6 points)
C.2 1 (of 1 point)
C.3 2 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 5 (of 10 points)
B.2 10 (of 21 points)
B.3 3 (of 5 points)
B.4 4 (of 5 points)
B.5 4 (of 5 points)
B.6 5 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

71

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$31,940</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

UL Lafayette faculty request funding for a new FT-IR instrument to replace two existing FT-IR instruments and to be used primarily for instruction, potentially impacting over 300 students per year. The goal is to acquire a system with features that are conducive to easy access and use by students. However, it is not clear exactly what the shortcomings of the existing system are, nor has the applicant explained how the new system will overcome those shortcomings. The objectives are not measurable. A number of educational and research areas in which the new instrument will be used are listed, but without explanation of the deficiencies of the existing system for the activities. In light of the lack of clarity regarding the value added by the requested instrument, it is difficult for the panel to determine the potential added eminence or educational value that would accrue from acquiring an FT-IR. Overall, the panel found no compelling rationale for the requested system and does not recommend funding. Major revision of this proposal would be necessary for the project to be worthy of funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 019CHE-14

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Acquisition of an Inductively Coupled Plasma Optical Emission Spectrometer [ICP-OES]

PRINCIPAL INVESTIGATOR: Thomas Junk

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or _____ (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 5 (of 10 points)
B.2 10 (of 21 points)
B.3 5 (of 5 points)
B.4 2 (of 5 points)
B.5 3 (of 5 points)
B.6 5 (of 5 points)
B.7 1 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

75

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$98,472</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The request is for funds to replace a 17-year-old ICP-OES instrument with a more modern one to support teaching and research in analytical chemistry. Acquisition of this equipment would help ULL remain in compliance with chemistry program certification requirements. While the goal is reasonable, the rationale, objectives, and execution plan lack clarity. Little explanation of how the ICP-OES complements other atomic spectroscopy techniques (AAS) with respect to analytical capabilities is provided. The PI indicates, for example, that the new instrument will be used to measure Ca and Mg, which would be done better with AAS. The PI should highlight the measurements that are not possible with AAS but which can be performed with an ICP-OES. While the basic configuration of the new system may be similar to the old one, it is likely that operational software will be different and complex. This would require training students and others who will use the instrument. This issue is not sufficiently addressed. The evaluation plan explains little about the expected programmatic and educational impacts of the project. The proposal could perhaps be fundable in another cycle with revisions. The panel does not recommend funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 020CHE-14

INSTITUTION: University of Louisiana at Lafayette

TITLE OF PROPOSAL: Integrating Fluorescence Spectroscopy into Chemistry Teaching
and Research Laboratories for Undergraduates Majoring in
Chemistry, Biology and Engineering

PRINCIPAL INVESTIGATOR: Wu Xu

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 16 (of 21 points)
B.3 5 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 5 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

95

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$33,222</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$33,222</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

A University of Louisiana at Lafayette faculty member plans to acquire instrumentation for new program enhancement initiatives. The project's goal is to integrate fluorescence spectroscopy in teaching and research in three targeted academic programs: chemistry, biology, and chemical engineering. Several courses in these academic programs will be restructured to incorporate instructional and research activities based on fluorescence spectroscopy. This will not only broaden the students' scientific experience and exposure, but will also enhance the image of the institution. Overall, the proposal is well written and the rationale for the project is sound, especially considering the very modest level of funding requested. This application is highly recommended for full funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 021CHE-14

INSTITUTION: University of New Orleans

TITLE OF PROPOSAL: Enhancing Research Infrastructure for Chemical Computing

PRINCIPAL INVESTIGATOR: Dhruva Chakravorty

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 2 (of 5 points)
A.3 2 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 8 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 5 (of 10 points)
B.2 11 (of 21 points)
B.3 3 (of 5 points)
B.4 2 (of 5 points)
B.5 2 (of 5 points)
B.6 5 (of 5 points)
B.7 2 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

66

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$226,737</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This UNO proposal seeks support to acquire a GPU computing facility for computational chemistry research. It will be a shared facility that will be accessible to multiple users on campus as well as researchers in other institutions in the New Orleans area. The PI also states that with the multiuser accessibility, research collaborations will be enhanced within the immediate New Orleans area. However, there are no specific objectives identified. The evaluation plan is weak and the narrative is wordy, unnecessarily long, and does not convey essential information clearly. The proposal states that GPU-based clusters will be established, but how this will be accomplished is unclear. What is unique about GPU? The project as written will have minimal impact on the curriculum and students. It is not recommended for funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 022CHE-14

INSTITUTION: University of New Orleans

TITLE OF PROPOSAL: Acquisition of an Atomic Layer Deposition System for Promoting
Nanomaterials and Nanodevices Fabrication at the UNO

PRINCIPAL INVESTIGATOR: Weilie Zhou

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 3 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b _____ (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 8 (of 10 points)
B.2 6 (of 21 points)
B.3 5 (of 5 points)
B.4 2 (of 5 points)
B.5 2 (of 5 points)
B.6 5 (of 5 points)
B.7 2 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes X No _____

G. Total Score:

74

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$239,475</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$0</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

This proposal was submitted by researchers at UNO's Advanced Materials Research Institute (AMRI). AMRI houses a well-developed research group with an impressive record of accomplishments. The researchers, whose primary focus is nanoscience, have earned multimillion-dollar grants, mainly from DoD/DARPA. Strong collaborations and partnerships have been established with other organizations and institutions. It is evident that the group has considerable regional impact. Nevertheless, the panel found no clear indication of what will be accomplished with the requested equipment. The objectives stated are really expected outcomes. The project plan is vague. Information on the operational features of the equipment under different applications is provided, but there is little information about the work plan and no discernible direct impact on the curricula or students other than those involved in AMRI. The evaluation plan is limited to student activities. Significant omissions such as these make a potentially fundable project weak. Major revisions would be required for this proposal to be recommended for funding in another cycle. The panel recommends no funding.

RATING FORM FOR ENHANCEMENT INSTRUCTIONAL AND RESEARCH EQUIPMENT REQUESTS

PROPOSAL NUMBER: 023CHE-14

INSTITUTION: Xavier University of Louisiana

TITLE OF PROPOSAL: Expansion Nuclear Magnetic Resonance Equipment for
Undergraduate Research and Modernization of Curriculum

PRINCIPAL INVESTIGATOR: Candace Lawrence

A. The Current Situation

(Total of 10 Points)

A.1 Yes X No _____
A.2 5 (of 5 points)
A.3 5 (of 5 points)

C. Equipment

(Total of 10 Points)

C.1 6 (of 6 points)
C.2 1 (of 1 point)
C.3 2 (of 3 points)

E. Economic and/or Cultural Development and Impact

(Total of 12 Points)

E.1 2 (of 2 points)
E.2a 10 (For S/E)
or (of 10 points)
E.2b (For NS/NE)

B. The Enhancement Plan

(Total of 56 Points)

B.1 10 (of 10 points)
B.2 16 (of 21 points)
B.3 5 (of 5 points)
B.4 5 (of 5 points)
B.5 5 (of 5 points)
B.6 5 (of 5 points)
B.7 3 (of 5 points)

D. Faculty and Staff Expertise

(Total of 12 Points)

D.1 12 (of 12 points)

F. Previous Support Fund Awards

(No Points Assigned)

G.1 Yes _____ No X

G. Total Score:

92

 (of 100 points)

(Note: Proposals with a total score below 70 will not be recommended for funding.)

SPECIFIC BUDGETARY	Requested Amount:	<u>\$143,430</u>
RECOMMENDATIONS:	Recommended Amount:	<u>\$136,030</u>

COMMENTS: (Discuss proposal strengths and weaknesses, particularly in those sections where significant point deductions have been made. Include suggestions for resubmission. For proposals recommended for funding, include all applicable stipulations in budgets and scopes of work.)

The applicant requests funding for two bench-top, non-cryogenic NMRs for student use. The systems proposed are easy to use and not very demanding in maintenance. The instruments will augment existing NMRs that are not amenable to routine use by students. The department has over 600 chemistry majors, and therefore the impact on students is potentially quite significant. While the project is well rationalized, the execution and evaluation plans are somewhat lacking.

Notwithstanding these weaknesses, the panel recommends partial funding but has concerns about the proposed budget. Installation and training charges of \$7,400 (\$3,700 per unit) are requested.

Installation and training charges are generally included in the negotiated price of the systems.

Moreover, why should training be charged for each system if both systems are similar? The panel recommends partial funding of \$136,030, which does not include \$7,400 for installation and training.

Appendix A

Summary List of Proposals

Proposals Submitted to the Traditional Enhancement Program - Chemistry
for the FY 2013-14 Review Cycle

Proposal Number	PI Name	Institution	Duration	Equipment/ Non Equipment	New/ Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
001CHE-14	Dr. Ernest Blakeney	Centenary College	1 Year	E	New Request	Enhanced Chemical Education at Centenary College Facilitated by NMR Spectroscopy	\$235,937.00	\$0.00	\$235,937.00
002CHE-14	Dr. Kayanush Aryana	Louisiana State University Agricultural Center	1 Year	E	New Request	Equipment for the enhancement of filtration of chemical components research and teaching at Louisiana State University Agricultural Center.	\$134,650.00	\$0.00	\$134,650.00
003CHE-14	Dr. Joan King	Louisiana State University Agricultural Center	1 Year	E	New Request	Enhancing the Food Science Carbohydrate Laboratory	\$117,746.00	\$0.00	\$117,746.00
004CHE-14	Prof. Todd Shupe	Louisiana State University Agricultural Center	2 Years	E	New Request	Enhancement of Preservative-Treated Wood Recycling Research at the Louisiana Forest Products Development Center	\$269,894.00	\$0.00	\$269,894.00
005CHE-14	Prof. Leslie Butler	Louisiana State University and A & M College - Baton Rouge	2 Years	E	New Request	Development of a Grating-Based X-ray Interferometer at the LSU CAMD synchrotron Tomography Beamline	\$171,332.00	\$0.00	\$171,332.00
006CHE-14	Prof. Jayne Garno	Louisiana State University and A & M College - Baton Rouge	2 Years	E	New Request	Acquisition of a High-Resolution Scanning Probe Microscope for Chemistry, Materials and Nanoscience Research	\$207,300.00	\$0.00	\$207,300.00
007CHE-14	Prof. Evgueni Nesterov	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	Facilities for Materials and Devices Characterization: Near-Infrared Enhanced Phosphorimeter	\$71,868.00	\$0.00	\$71,868.00

Proposals Submitted to the Traditional Enhancement Program - Chemistry
for the FY 2013-14 Review Cycle

Proposal Number	PI Name	Institution	Duration	Equipment/ Non Equipment	New/ Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
008CHE-14	Prof. Justin Ragains	Louisiana State University and A & M College - Baton Rouge	1 Year	E	New Request	Walk-Up Mass Spectrometer with Liquid Chromatography for Chemical Synthesis	\$189,173.00	\$0.00	\$189,173.00
009CHE-14	Dr. George Stanley	Louisiana State University and A & M College - Baton Rouge	2 Years	E	New Request	Enhancement of the LSU NMR Facility	\$131,149.00	\$0.00	\$131,149.00
010CHE-14	Dr. Kui Chen	Louisiana State University in Shreveport	1 Year	E	New Request	Acquisition of Spectronic 200 Spectrophotometer to enhance Undergraduate Chemistry Laboratories at LSUS	\$21,570.00	\$0.00	\$21,570.00
011CHE-14	Prof. Elahe Mahdavian	Louisiana State University in Shreveport	1 Year	E	New Request	Enhancement of Spectroscopic Technology in Biochemistry Laboratories	\$79,000.00	\$0.00	\$79,000.00
012CHE-14	Dr. Marilyn Cox	Louisiana Tech University	1 Year	E	New Request	Improvements to the Sophomore, Junior, and Senior Level Laboratory Experiences at Louisiana Tech University	\$70,988.00	\$0.00	\$70,988.00
013CHE-14	Dr. Yusheng Dou	Nicholls State University	1 Year	E	New Request	Enhancing Computational Chemistry Instruction	\$8,995.00	\$0.00	\$8,995.00
014CHE-14	Dr. Vincent Sichula	Nicholls State University	1 Year	E	New Request	Acquisition of a 300 MHz NMR Spectrometer to Enhance Research and Instruction in Chemistry and Chemical Biology	\$206,700.00	\$0.00	\$206,700.00
015CHE-14	Dr. VICTORIA DAHMES	Our Lady of Holy Cross College	1 Year	E	New Request	Enhancement of Educational Support for Student Success in Chemistry	\$0.00	\$0.00	\$0.00

Proposals Submitted to the Traditional Enhancement Program - Chemistry
for the FY 2013-14 Review Cycle

Proposal Number	PI Name	Institution	Duration	Equipment/ Non Equipment	New/ Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
016CHE-14	Dr. Weihua Wang	Southern University and A&M College - Baton Rouge	2 Years	E	New Request	Enhancement of FT-Raman Capability for Research and Teaching in the Department of Chemistry at Southern University	\$122,649.00	\$0.00	\$122,649.00
017CHE-14	Dr. Russell Schmehl	Tulane University	1 Year	E	New Request	Enhancement of Facilities for Time Resolved Spectroscopy in the Tulane Chemistry Department	\$124,872.00	\$0.00	\$124,872.00
018CHE-14	Prof. August Gallo	University of Louisiana at Lafayette	1 Year	E	New Request	Purchase of a FT-IR Spectrophotometer for Teaching and Research in the Chemistry Curriculum	\$31,940.00	\$0.00	\$31,940.00
019CHE-14	Prof. Thomas Junk	University of Louisiana at Lafayette	1 Year	E	New Request	Acquisition of an Inductively Coupled Plasma Optical Emission Spectrometer [ICP-OES]	\$98,472.00	\$0.00	\$98,472.00
020CHE-14	Prof. Wu Xu	University of Louisiana at Lafayette	1 Year	E	New Request	Integrating Fluorescence Spectroscopy into Chemistry Teaching and Research Laboratories for Undergraduates Majoring in Chemistry, Biology and Engineering	\$33,222.00	\$0.00	\$33,222.00
021CHE-14	Prof. Dhruva Chakravorty	University of New Orleans	1 Year	E	New Request	Enhancing Research Infrastructure for Chemical Computing	\$226,737.00	\$0.00	\$226,737.00
022CHE-14	Prof. Weilie Zhou	University of New Orleans	1 Year	E	New Request	Acquisition of an Atomic Layer Deposition System for Promoting Nanomaterials and Nanodevices Fabrication at the UNO	\$239,475.00	\$0.00	\$239,475.00

Proposals Submitted to the Traditional Enhancement Program - Chemistry
for the FY 2013-14 Review Cycle

Proposal Number	PI Name	Institution	Duration	Equipment/ Non Equipment	New/ Continuation	Project Title	Amount Requested		
							Year 1	Year 2	Total
023CHE-14	Prof. Candace Lawrence	Xavier University	1 Year	E	New Request	“Expansion Nuclear Magnetic Resonance Equipment for Undergraduate Research and Modernization of Curriculum	\$143,430.00	\$0.00	\$143,430.00

***The RFP restricts second year funding requests to no more than \$50,000.**

Total Number of Proposals submitted	23
Total Money Requested for First Year	\$2,937,099.00
Total Money Requested for Second Year	\$0.00
Total Money Requested	\$2,937,099.00

Appendix B

Rating Forms

BOARD OF REGENTS SUPPORT FUND ENHANCEMENT PROGRAM, FISCAL YEAR 2013-14

RATING FORM FOR TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROPOSALS
PURCHASE OF INSTRUCTIONAL AND RESEARCH EQUIPMENT

INSTRUCTIONS: The completed evaluation form should represent the consensus of the expert members of the review panel and, as such, must reflect the final decisions of that panel. Review this form and the program guidelines prior to reading the proposal. The higher the score, the more clearly the proposal satisfies the criterion under consideration.

A. THE CURRENT SITUATION—10 points

- YES _____ NO _____
- _____ of 5 pts. A.1 Has the applicant adequately described the institution and unit(s)/department(s) that will benefit from the project, especially in terms of mission, faculty, students, and relevant institutional or departmental resources?
- _____ of 5 pts. A.2 To what extent will the proposed project enhance the affected department(s)/unit(s) and/or curricula?
- _____ of 5 pts. A.3 To what extent will the project complement and improve upon existing resources of the department(s) or unit(s)?

B. THE ENHANCEMENT PLAN—56 points

- _____ of 10 pts. B.1 Are the goals and objectives clearly stated? Are they realistic? Are the objectives measurable? Can the objectives be completed within the timeframe detailed in the proposal?
- _____ of 21 pts. B.2 Does the work plan sufficiently describe the activities that will be undertaken to achieve the goals and objectives of the proposal with responsible individuals listed for each activity and a schedule of// activities with benchmarks to be accomplished?
- _____ of 5 pts. B.3 To what extent will the proposed project propel the department(s)/ unit(s) into attaining a high level of regional, national, or international eminence--or maintaining a current high level of eminence--commensurate with degree offerings and/or functions?
- _____ of 5 pts. B.4 To what extent will the proposed project have an impact on the variety and/or quality of curricular offerings and instructional methods within the affected department(s) or unit(s)?
- _____ of 5 pts. B.5 To what extent will the proposed project enhance the ability of the department(s) or unit(s) to attract and/or retain students of high quality, particularly high quality students from Louisiana?
- _____ of 5 pts. B.6 To what extent will the project contribute to improving the quality and effectiveness of faculty teaching and improve faculty pedagogy?
- _____ of 5 pts. B.7 To what extent does the proposal indicate how the PIs will assess/evaluate the degree to which the project has achieved its goals?

C. EQUIPMENT—10 points

- _____ of 6 pts. C.1 To what extent has the proposal established a relationship between the enhancement plan activities and the type of equipment requested? Is the equipment well-justified? Will it significantly enhance the existing technological capability of the department(s)/units(s)? Does it reflect current and projected trends in technology?
- _____ of 1 pt. C.2 Is there a thorough survey of the current equipment inventory and does the proposal plan to make full use of the equipment?
- _____ of 3 pts. C.3 To what extent does the proposal present a reasonable plan to ensure a maximum usable lifetime for the equipment? Are housing and maintenance arrangements for equipment adequate?

D. FACULTY AND STAFF EXPERTISE—12 points

_____ of 12 pts D.1 Are the faculty and support staff appropriately qualified to implement this project? If special training will be required for faculty and/or other personnel, has an appropriate plan been developed?

E. ECONOMIC AND/OR CULTURAL DEVELOPMENT AND IMPACT—12 points

_____ of 2 pts. E.1 To what extent will the project assist in establishing a new relationship or strengthen an existing relationship with one or more industrial/institutional sponsors (e.g., private business, trade organization, professional organization, non-profit or community organization, another college or university or consortium of colleges and universities, federal government agency)?

_____ of 10 pts. E.2 To what extent will the project assist the submitting department(s)/unit(s) in promoting or enhancing economic, cultural and/or academic development and/or resources in Louisiana?

F. PREVIOUS SUPPORT FUND AWARDS—No points assigned

YES___ NO_____ F.1 If the Project Director or Co-Project Director has received previous Support Fund support, has it been adequately documented?

G. TOTAL SCORE (NOTE: Proposals with a total score below 70 will not be recommended for funding.)

_____ of 100 points

SPECIFIC BUDGETARY RECOMMENDATIONS

Requested Amount \$_____ Recommended Amount \$_____

I agree to maintain in confidence any information, documentation and material of any kind (hereinafter referred to as "Material") included in this proposal; I further agree not to disclose, divulge, publish, file patent application on, claim ownership of, exploit or make any other use whatsoever of said "Material" without the written permission of the principal investigator. To the best of my knowledge, no conflict of interest is created as a result of my reviewing this proposal.

Reviewer's Name and Institution:_____

Reviewer's Signature:_____ Date:_____

(Form 6.11, rev 2013)

BOARD OF REGENTS SUPPORT FUND ENHANCEMENT PROGRAM, FISCAL YEAR 2013-14

**RATING FORM FOR TRADITIONAL AND UNDERGRADUATE ENHANCEMENT PROPOSALS
REQUESTS OTHER THAN EQUIPMENT PURCHASES (e.g., Colloquia, Curricular Revisions, etc.)**

INSTRUCTIONS: The completed evaluation form should represent the consensus of the expert members of the review panel and, as such, must reflect the final decisions of that panel. Review this form and the program guidelines prior to reading the proposal. The higher the score, the more clearly the proposal satisfies the criterion under consideration.

A. THE CURRENT SITUATION—10 points

- YES _____ NO _____
- _____ of 5 pts. A.1 Has the applicant adequately described the institution and department(s)/unit(s) that will benefit from the project, especially in terms of mission, faculty, students, and relevant institutional or departmental resources?
- _____ of 5 pts. A.2 To what extent will the proposed project enhance the affected department(s)/unit(s) and/or curricula?
- _____ of 5 pts. A.3 To what extent will the project complement and improve upon existing resources of the department(s)/unit(s)?

B. THE ENHANCEMENT PLAN—66 points

- _____ of 10 pts. B.1 Are the goals and objectives clearly stated? Are they realistic? Are the objectives measurable? Can the objectives be completed within the timeframe detailed in the proposal?
- _____ of 20 pts. B.2 Does the work plan sufficiently describe the activities that will be undertaken to achieve the goals and objectives of the proposal with responsible individuals listed for each activity and a schedule of activities with benchmarks to be accomplished?
- _____ of 8 pts. B.3 To what extent will the proposed project propel the department(s)/unit(s) into attaining a high level of regional, national, or international eminence--or maintaining a current high level of eminence—commensurate with degree offerings and/or functions?
- _____ of 8 pts. B.4 To what extent will the proposed project have an impact on the variety and quality of curricular offerings and instructional methods within the affected department(s) or unit(s)?
- _____ of 8 pts. B.5 To what extent will the proposed project enhance the ability of the department(s) or unit(s) to attract and/or retain students of high quality, particularly high quality students from Louisiana?
- _____ of 8 pts. B.6 To what extent will the project contribute to improving the quality and effectiveness of faculty teaching and improve faculty pedagogy?
- _____ of 4 pts. B.7 To what extent does the proposal indicate how the PIs will assess/evaluate the degree to which the project has achieved its goals?

C. FACULTY AND STAFF EXPERTISE—12 points

- _____ of 12 pts. C.1 Are faculty and support staff appropriately qualified to implement the project? If special training will be required for faculty and/or other personnel, has an appropriate plan been developed?

D. ECONOMIC AND/OR CULTURAL DEVELOPMENT AND IMPACT—12 points

- _____ of 2 pts. D.1 To what extent will the project assist in establishing a new relationship or strengthen an existing relationship with one or more industrial/institutional sponsors (e.g., private business, trade organization, professional organization, non-profit or community organization, or another college or university or consortium of colleges and universities, federal government agency)?
- _____ of 10 pts. D.2 To what extent will the project assist the submitting department(s)/unit(s) in promoting or enhancing economic, cultural and/or academic development and/or resources in Louisiana?

E. PREVIOUS SUPPORT FUND AWARDS—No points assigned

YES___ NO___ E.1 If the Project Director or Co-Project Director has received previous Support Fund support, has it been adequately documented?

F. TOTAL SCORE (NOTE: Proposals with a total score below 70 will not be recommended for funding.)

___ of 100 points

SPECIFIC BUDGETARY RECOMMENDATIONS

Requested Amount \$_____ Recommended Amount \$_____

I agree to maintain in confidence any information, documentation and material of any kind (hereinafter referred to as "Material") included in this proposal; I further agree not to disclose, divulge, publish, file patent application on, claim ownership of, exploit or make any other use whatsoever of said "Material" without the written permission of the principal investigator. To the best of my knowledge, no conflict of interest is created as a result of my reviewing this proposal.

Reviewer's Name and Institution:_____

Reviewer's Signature:_____ Date:_____

(Form 6.12, rev 2013)